WHAT IS CLAIMED IS:

1. A method for improving performance and facility of operation of an array including one or more microbolometers, comprising:

applying two or more bias pulses substantially sequentially during a frame time to each of the microbolometers in the array;

measuring the two or more resulting signals corresponding to the bias pulses;

computing an average signal value from the resulting signals corresponding to each of the microbolometers in the array during the frame time; and

producing an output signal based on the computed average signal value for each of the microbolometers in the array during the frame time.

2. The method of claim 1, further comprising:

repeating the applying, measuring, computing, and producing steps to produce output signals during each frame time.

3. The method of claim 2, further comprising:

applying a corrective electrical signal to the microbolometer signals to correct for resistance non-uniformity between the one or more microbolometers in the array to obtain substantially uniform signal values.

4. The method of claim 3, further comprising:

converting the signal values associated with each of the microbolometers in the array to digital signal values.

5. The method of claim 4, further comprising:

passing the digital signal values associated with each of the microbolometers in the array to a digital image processor to perform computations and substantially remove image defects.

6. The method of claim 5, wherein the image defects comprises:

fine offsets, gain non-uniformity, dead pixels.

7. The method of claim 1, wherein the bias pulses are substantially equal in magnitude.

8. The method of claim 1, wherein the bias pulses are substantially equally spaced in time.

9. The method of claim 1, wherein the two or more applied electrical bias pulses comprise voltage bias pulses.

10. The method of claim 1, wherein the resulting electrical signals comprise current signals.

11. The method of claim 1, wherein the bias pulses are in the range of about 2 to 100 bias pulses.

12. The method of claim 1, wherein each of the two or more bias pulses has a time duration in the range of about 0.1 to 20 microseconds.

13. The method of claim 1, wherein the frame time is the time it takes for the array to produce a complete image of an object being viewed by the array.

14. An infrared radiation detector apparatus, comprising:

microbolometers in an array;

a timing circuit coupled to the array to apply two or more bias pulses substantially sequentially to each of the microbolometers in the array in each frame time;

a measuring circuit coupled to the array to measure two or more resulting signals associated with each of the applied two or more bias pulses during the frame time;

a computing circuit coupled to the measuring circuit to compute an average signal value for each of the microbolometers in the array from the measured two or more resulting signals during the frame time.

15. The apparatus of claim 14, wherein the measuring circuit further comprises an integrator and an A/D converter to convert the output signal values to a digital signal values.

16. The apparatus of claim 14, wherein the measuring circuit further comprises:

a correction circuit to apply a corrective electrical signal to the signals to correct for resistance non-uniformity between the microbolometers of the array to obtain a substantially uniform output signal value.

17. The apparatus of claim 14, wherein the computing circuit further comprises:

computing means to produce output signals based on the computed average signal value for each of the microbolometers in the array during the frame time.

18. The apparatus of claim 17, wherein the computing circuit further corrects the output signal values for fine offsets, gain non-uniformity, and dead pixels.

19. The apparatus of claim 18, wherein the computing circuit further comprises:

digital memories to store correction values for each of the microbolometers in the array.

20. The apparatus of claim 14, wherein the two or more bias pulses are substantially equal in magnitude.

21. The apparatus of claim 20, wherein the two or more pulses are substantially equally spaced in time.

22. The apparatus of claim 14, wherein the two or more bias pulses are voltage bias pulses.

23. The apparatus of claim 22, wherein the resulting signals are current signals.

24. The apparatus of claim 14, wherein the two or more bias pulses are in the range of about 2 to 100 bias pulses.

25. The apparatus of claim 24, wherein the two or more bias pulses have time duration in the range of about 0.1 to 20 microseconds.

26. The apparatus of claim 14, wherein the frame time is the time it takes for the array to produce a complete image of an object being viewed by the array.